

AMENDMENTS TO THE CLAIMS

1-16. (Canceled)

17. (Currently Amended) ~~The apparatus of claim 1, An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non-recorded portions with energy injected into the recording medium, comprising:~~

energy generation means which generates recording energy;

reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein in a case of reproducing the marks having the test information, a target condition of a track following operation of the position control means is unchanged in a first reproduction in comparison with a time when the test information is recorded and changed in a second reproduction in comparison with a time when the test information is recorded, and

wherein the changed content of the control operation for the position control means is a tracking-offset amount, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks,

wherein in a case where the test information is supplied to the drive means and

recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used,

wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first reproduction and a signal amplitude in the second reproduction.

18. (Currently Amended) The apparatus of claim 1, An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non-recorded portions with energy injected into the recording medium, comprising:

energy generation means which generates recording energy;

reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein in a case of reproducing the marks having the test information, a target condition of a track following operation of the position control means is unchanged in a first reproduction in comparison with a time when the test information is recorded and changed in a second reproduction in comparison with a time when the test information is recorded, and

wherein the changed content of the control operation for the position control means is a tracking polarity, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used,

wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first reproduction and a signal amplitude in the second reproduction.

19. (Currently Amended) The apparatus of claim 1, An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non-recorded portions with energy injected into the recording medium, comprising:

energy generation means which generates recording energy;

reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein in a case of reproducing the marks having the test information, a target condition of a track following operation of the position control means is unchanged in a first reproduction in comparison with a time when the test information is recorded and

changed in a second reproduction in comparison with a time when the test information is recorded, and

wherein the changed content of the control operation for the position control means is a stop or a start of a tracking operation, indicated by the position control means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used,

wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first reproduction and a signal amplitude in the second reproduction.

20. (Currently Amended) ~~The apparatus of claim 1, further comprising An information recording apparatus for recording information on a recording medium by forming marks different in a physical property from non recorded portions with energy injected into the recording medium, comprising:~~

energy generation means which generates recording energy;

reading means which reads marks recorded on the recording medium;

position control means which controls an injecting position of the recording energy output from the energy generation means for the recording medium and controls a reading position of the reading means;

vibration means which vibrates the reading means in a direction perpendicular to a main scanning direction on the recording medium and in parallel with the recording medium;

drive means which drives the energy generation means;

switching means which selectively switches information based on user's data or test information to be supplied to the drive means;

evaluation means which evaluates a reproduced signal amplitude obtained from the reading means; and

recording condition control means which controls a recording condition in accordance with an evaluation result obtained from the evaluation means,

wherein in a case of reproducing the marks having the test information, a target condition of a track following operation of the position control means is unchanged in a first reproduction in comparison with a time when the test information is recorded and changed in a second reproduction in comparison with a time when the test information is recorded,

wherein the changed content of the control operation for the position control means is a stop or a start of vibrating operation of the vibrating means in a case where the test information is supplied to the drive means and recorded on the recording medium, and in-phase mark arrangement is recorded on adjacent tracks,

wherein in a case where the test information is supplied to the drive means and recorded on the recording medium, the test information inconsistent with a conversion rule of a conversion means is used,

wherein test information containing a longer run-length than a run-length rule of the conversion means is used as the test information, and

wherein the recording condition is controlled in accordance with a signal amplitude in the first reproduction and a signal amplitude in the second reproduction.

21-37. (Canceled)